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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/432,334      | 11/02/1999  | RONALD A. GUIDOTTI   | 98-2069             | 9910             |

23413 7590 02/12/2004

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| EXAMINER |
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MAPLES, JOHN S

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1745

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

**Office Action Summary****Application No.**

09/432,334

**Applicant(s)**

GUIDOTTI ET AL.

**Examiner**

John S. Maples

**Art Unit**

1745

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20,24-28 and 41-54 ~~is/are~~ pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 41-44 ~~is/are~~ allowed.
- 6) ☒ Claim(s) 21,24,27,28 and 45-54 ~~is/are~~ rejected.
- 7) ☒ Claim(s) 25,26 ~~is/are~~ objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br/>Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
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1. Applicant's election of the metal sulfide in Paper No. 080103 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the election of species requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 21, 24, 27, 28, 45, 46, 48-51, 53 and 54 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disulfide active material, does not reasonably provide enablement for the sulfide active material. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. (New Rejection)

The present specification and all of the examples set forth disulfide compounds used as the active material in the present electrode. There is no support in the specification for the sulfide compounds-the monosulfides. Thus the claims should be amended to recite the disulfide compounds as the active material in the claimed electrode.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 45-48 and 50-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Muffoletto et al.-US 5,716,422 (Muffoletto). (New rejection with regard to claims 50-53)

Reference is made to claims 1 and 7 in the patent to Muffoletto. It is inherent that with the thickness of the active material being 0.001 inch (25 microns) that the particle size would be within the microstructured size range as claimed in claims 48 and 53.

Applicant's arguments have all been considered but are not deemed persuasive.

Applicant argues that Muffoletto does not teach a source of elemental sulfur and a metal sulfide, a source of elemental selenium and a metal selenide or a source of elemental telluride and a metal tellurium. As argued by applicant on pages 4-5 of the January 17, 2003 Remarks, only a trace of the elemental sulfur is present in the final claimed product. Thus this material is not required to be present in the electrode of the applied reference. Thus Muffoletto does not require the presence of the elemental sulfur in the final product and hence the claimed subject matter is met by the teachings of Muffoletto.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 49 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muffoletto in view of Gay. (New rejection with regard to claim 54)

Muffoletto teaches all of the claimed subject matter except for the nanostructured iron sulfide. Gay discloses a nanostructured iron sulfide in Example 1 of this patent. To utilize in the teachings of Muffoletto the 15 nanometer particle size of Gay would have been obvious to one of ordinary skill in this art at the time the invention was made to that the active material would have been packed more tightly and would have produced a greater power output.

Applicant's arguments have been considered but are not persuasive. Applicant argues that Gay does not supply the element of the percentage of active material in the layer of claims 21, 41 and 45. This argument is deemed moot because the examiner has not rejected these particular claims over the combination of Muffoletto in view of Gay.

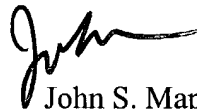
Applicant further argues that claims 28, 48 and 44 are allowable because these claims depend on allowable independent claims. It is noted that claims 28 and 48 have not been rejected over the combination of Muffoletto and Gay and thus this argument is moot. In addition claim 44 is dependent on an allowed claim as applicant has stated and so this claim is allowed over the prior art of record.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Maples whose telephone number is 571-272-1287. The examiner can normally be reached on Monday-Thursday from 6:15-3:45.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John S. Maples  
Primary Examiner  
Art Unit 1745

JSM/2-9-2004